CLAIMS

1. A stacked switch using a resilient packet ring protocol comprising:

a plurality of switch modules coupled to one another in a ring topology and each having a plurality of external terminals for interfacing with external devices, where each switch module includes:

(a) an external interface for communicating with the external terminals, the external interface configured to communicate using a communication protocol; and

(b) an internal interface for communicating with other switches, the internal interface using a resilient packet ring (RPR) protocol.

2. The stacked switch of claim 1, wherein each switch module further includes:

(c) a controller coupled to the external interface and the internal interface and configured to selectively communicate information between the external interface and the internal interface.

3. The stacked switch of claim 2, further comprising:

a master management processor coupled to one or more switch modules and configured to provide instructions regarding the communication of information between each switches' external interface and internal interface, and to control data flow; and

a slave management processor coupled to the master management processor through at least one switch and one or more switch modules and configured to provide instructions regarding the communication of information between each switches' external interface and internal interface, and to control data flow.

4. The stacked switch of claim 3 further comprising:

the master management processor is configured to assign the master/slave relationship based on predetermined criteria; and

the slave management processor is configured to become a master management processor if the master management processor fails.

5. The stacked switch of claim 3, further comprising:

a link aggregation port coupled to one or more switch modules' external terminals and configured to selectively aggregate information to and from the switch modules.

6.	The stacked switch of claim 5, further comprising:

a memory configured to store statistics associated with the communication of data through at least one module in the switch; and

wherein the master processor is configured to evaluate the statistics in the memory and to generate a link signal representative of desired links/ports to be aggregated; and

wherein the link aggregation port is configured to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules.

7.	The stacked switch of claim 6, wherein:

the master processor is configured to introduce marker information into the data to ensure that the integrity of the data is reasonably maintained. when a link aggregation is modified.

8.	A method of switching data through a stacked switch using a resilient packet ring protocol, the stacked switch having a plurality of modules, where each module includes external interface for communicating with external terminals and an internal interface for communicating with other switches using a resilient packet ring (RPR) protocol, comprising the steps of:

storing statistics associated with the communication of data through at least one module in the switch; and

evaluating the statistics in the memory and to generate a link signal representative of desired links/ports to be aggregated; and

selectively activating a link aggregation port to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules.

9.	The method of claim 8, further comprising the step of:

Selectively introducing marker information into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified.